A6 Cont

3. (Amended) A process according to claim 1 wherein the hydrocarbon is a straight chain hydrocarbon or a branch chain hydrocarbon.

6. (Amended) A process according to claim 1 wherein the hydrocarbon is selected from methane, propane, butane, hexane, heptane, normal-octane, iso-octane, naphthas, liquified petroleum gas, reformulated petrol and diesel-type fuels.

A7

7. (Amended) A process according to claim 1 wherein the oxygen-containing gas is air.

8. (Amended) A process according to claim 1 wherein rhodium comprises 0.1 weight *per cent* to 5 weight *per cent* of the total weight of the supported catalyst.

A8

10. (Amended) A process according to claim 1 wherein the refractory oxide support material is a mixture of ceria and zirconia.

A9

13. (Amended) A process according to claim 1 wherein the catalyst is pre-heated to a temperature at which self-sustaining partial oxidation of the hydrocarbon commences.

18. (Amended) A process according to claim 1 wherein the mixture of the hydrocarbon and the oxygen-containing gas is fed to the catalyst when the catalyst has reached the temperature at which self-sustaining partial oxidation of the hydrocarbon will occur.

A10

19. (Amended) A process as claimed in claim 1 operated in combination with a catalysed water-gas shift reaction for the reduction of carbon monoxide in the hydrogen produced from the hydrogen.

21. (Amended) A process according to claim 19 wherein the water-gas shift reaction catalyst is added to the rhodium based catalyst for the hydrogen generation reaction.

A11